

ABSTRACT OF THE DISCLOSURE

A filament wound strut as well as a method of making the strut. The filament wound strut has a cylindrical section merging into ends through tapered end sections and which ends may be forked or otherwise arranged to receive a lug fitting. The flat ends may be provided with a specially designed pre-form having a generally oval shape, and which is formed by filament reinforcement in a racetrack format surrounding a quasi-isotropic laminate. In accordance with this construction, the wound structure will react to tension loads and the inner laminate reacts to compression loads, while minimizing the load transfer through edge bearing and shear. A method of producing the strut is also provided in which filament materials are wound about a mandrel with proper winding pattern and sufficient thickness to produce the desired axial stiffness and the required strength in each of the end sections. Thereafter, the material may be consolidated and polymerized in an autoclave.

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